

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-75. (Canceled)

76. (Currently Amended) A method for prefetching data ~~for a set of objects, each object in the set comprising a plurality of attributes, the method~~ comprising:

prior to receiving a query for an attribute corresponding to an initial object in an object structure comprising a plurality of objects, creating a structure context description that identifies each object in the object structure~~in the set of objects, whereby the structure context description reduces time required to process the query after the query is received~~wherein the structure context description is created from a state of an object related to the initial object, the state of the related object comprising a reference to the object structure;

associating the structure context description with each object ~~in the set of objects~~in the object structure;

storing the structure context description in a physical storage system; and

~~receiving from an application the query that requests data corresponding to a first attribute of a first in the set of objects; and~~

~~in response to~~ upon receiving the query:

retrieving data corresponding to the ~~first~~ attribute of the ~~first~~ initial object;

returning the data corresponding to the ~~first~~ attribute of the ~~first~~ initial object to the application;

using the structure context description to identify ~~data corresponding to the first attribute of other objects in the set of objects~~at least one other object in the object structure that has the attribute;

retrieving ~~[[the]]~~ data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~object structure; [[and]]

placing in cache the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure for future use; and

upon receiving a request the attribute for one of the other objects, providing the requested attribute from the data stored in the cache, whereby the attribute is provided in less time than if the attribute were not cached.

77. (Currently Amended) The method of claim 76, ~~further comprising storing the structure context description in at least one member of a group comprising~~ wherein the physical storage system is at least one of memory of a client application program, memory allocated to a data storage system, and a table of a relational database.

78. (Currently Amended) The method of claim 76, comprising retrieving by an object repository the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure.

79. (Currently Amended) A computer-readable storage medium having stored thereon computer-executable instructions for performing steps comprising:

prior to receiving a query for an attribute corresponding to an initial object in an object structure comprising a plurality of objects, creating a structure context description that identifies each object in ~~a set of objects~~ the object structure, ~~whereby the structure context description reduces time required to process the query after the query is received;~~

associating the structure context description with each object in the ~~set of objects~~ object structure; and

~~receiving from an application the query that requests data corresponding to a first attribute of a first object in the set of objects; and~~

~~in response to~~ upon receiving the query:

retrieving data corresponding to the ~~first~~ attribute of the ~~first~~ initial object;

returning the data corresponding to the ~~first~~ attribute of the ~~first~~ initial object to the application;

using the structure context description to identify ~~data corresponding to the first attribute of other objects in the set of objects~~ at least one other object in the object structure that has the attribute;

retrieving ~~[[the]]~~ data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure; ~~[[and]]~~

placing in cache the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure ~~for future use and~~

upon receiving a request for the attribute for one of the other objects,
providing an appropriate data item from the data stored in the cache, whereby the attribute is
provided in less time than if the attribute were not cached.

80. (Previously Presented) The computer-readable storage medium of claim 79, having stored thereon further computer-executable instructions for storing the structure context description in at least one member of a group comprising memory of a client application program, memory allocated to a data storage system, and a table of a relational database.

81. (Currently Amended) The computer-readable storage medium of claim 79, wherein the computer-executable instructions for retrieving the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure comprise computer-executable instructions for retrieving by an object repository the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure.

82. (Currently Amended) A system for prefetching data ~~for a set of objects, each object in the set comprising a plurality of attributes, the system~~ comprising:

a processor operative to execute computer executable instructions; and
memory having stored therein computer executable instructions for
performing the following steps:

prior to receiving a query for an attribute corresponding to an initial object in an object structure comprising a plurality of objects, creating a structure context description that identifies each object in the ~~set of objects~~ object structure, ~~whereby the structure context description reduces time required to process the query after the query is received;~~

associating the structure context description with each object in the ~~set of objects~~ object structure; and

~~receiving from an application the query that requests data corresponding to a first attribute of a first object in the set of objects; and~~
~~in response to upon~~ receiving the query:
retrieving data corresponding to the ~~first~~ attribute of the ~~first~~ initial object;
returning the data corresponding to the ~~first~~ attribute of the ~~first~~ initial object to the application;
using the structure context description to identify ~~data corresponding to the first attribute of other objects in the set of objects~~ at least one other object in the object structure that has the first attribute;
retrieving ~~[[the]]~~ data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure; and
placing in cache the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure ~~for future use.~~

83. (Previously Presented) The system of claim 82, wherein the structure context description is stored in at least one member of a group comprising memory of a client application program, memory allocated to a data storage system, and a table of a relational database.

84. (Currently Amended) The system of claim 82, further comprising an object repository for retrieving the data corresponding to the ~~first~~ attribute of the other objects in the ~~set of objects~~ object structure.

85-93. (Canceled)

94. (New) The method of claim 76, wherein each object is an instance of a COM (“Component Object Model”) class.

95. (New) The method of claim 94, wherein the state of each object is organized according to at least one interface of a class associated with the object.

96. (New) The method of claim 95, wherein the state of an object further comprises at least one collection and at least one attribute implemented by an interface of the associated class.
97. (New) The method of claim 96, wherein the query comprises an application accessing a component of a state of an object.
98. (New) The method of claim 97, wherein a component is one of a collection and a property of an interface associated with the object.
99. (New) The computer readable storage medium of claim 79, wherein each object is an instance of a COM (“Component Object Model”) class.
100. (New) The computer readable storage medium of claim 99, wherein the state of each object is organized according to at least one interface of a class associated with the object.
101. (New) The computer readable storage medium of claim 100, wherein the state of an object further comprises at least one collection and at least one attribute implemented by an interface of the associated class.
102. (New) The system of claim 82, wherein each object is an instance of a COM (“Component Object Model”) class.
103. (New) The system of claim 102, wherein the state of each object is organized according to at least one interface of a class associated with the object.
104. (New) The system of claim 103, wherein the state of an object further comprises at least one collection and at least one attribute implemented by an interface of the associated class.